

Comments and Response

Claims 1-21 are pending and of these claims 11-21 have been allowed and claims 1-10 stand rejected. In view of the comments below Applicant respectfully requests that the Examiner reconsider the present application including claims 1-10 and withdraw the rejections of these claims.

a) Claims 1-4 and 8-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al (U.S. Patent No. 6,556,553) in view of Liu (U.S. Patent No. 5,825,759). The Examiner maintains that these references taken in combination show or suggest the limitations of claims 1-4 and 8-10. Applicant respectfully disagrees and offers, below a brief characterization of the references and present invention, followed by a more detailed discussion of the distinctions between the claimed invention and references as applied by the Examiner.

The Palmer et al reference deals with communication units 20 in a communication system 10, e.g. a wireless local area network WLAN, with access points 16 for providing or supporting a wireless link with the communications units within the access point's coverage area or cell 18. More specifically techniques are discussed where signal quality and trends thereof are used to adjust data rates and decide when the unit should roam to a new access point (see for example col. 5, line 36 et sequence or FIG. 4). Palmer et al does not address the threshold question of whether to attempt service acquisition.

As noted in an earlier response and expanded on here, the Liu reference (U.S. Patent No. 5,825,759) (Liu) discusses communications networks having home and visitor location registers (see for example the abstract, summary, etc.), similar to cellular systems and mobile agents that facilitate services, such as authentication and availability of appropriate databases and the like as a mobile user and corresponding device or communications unit travels about the area where service from the network is assured or given. What services are available or made available by the networks/agents may be a function, for example, of unit location or form of available connectivity, etc. (see example at first two paragraphs at col. 6) The Liu reference never considers the threshold question of whether a device should attempt service acquisition.

The present invention concerns wireless local area networks (WLANs) and WLAN devices (communications devices or units with capability to access a WLAN such as an IEEE 802.11 based network and the like) and more particularly a threshold question that is often presented with such WLANs, namely whether to attempt service acquisition, e.g. whether any WLAN or other WLAN device is available to provide any services. The procedure used by a WLAN device, e.g. PDA, computer, cell phone, each with WLAN capability, to find a WLAN or network access point (NAP) and establish a connection with the NAP for the WLAN is typically referred to as service acquisition. Only after service acquisition has occurred or been performed by the WLAN device, e.g. a NAP has been discovered and a link therewith established, do concerns, such as what quality of or type of service is appropriate or available, that are dealt with by Palmer et al and Liu arise. As is clear the subject matter of Palmer et al and Liu deals with matters that arise after service acquisition has been enabled, attempted or occurred.

WLANs are often adhoc networks where service acquisition is problematic and essentially opportunistic (is unit within range) as opposed to being all but guaranteed in, for example, a wide area network or well developed WLAN, such as contemplated by Palmer et al or Liu. The discovery and initial connection formation processes may include transmitting information to see whether there is any response and can be complex and time consuming with frankly little hope of being successful, given the relatively sparse coverage areas for many WLANs. Thus a WLAN device can consume all or much of its battery capacity and needlessly run security risks (broadcasting its presence) while doing these service acquisition processes, under circumstances where there is little or no need to be undertaking or interest in undertaking the processes.

The present invention addresses this threshold question of service acquisition for WLAN devices in the form of inventive methods and apparatus for advantageously selectively enabling or controlling service acquisition. Both references assume that service acquisition is undertaken or has already occurred and in fact rely at least implicitly on that in order to function. Applicant respectfully submits that there is nothing conditional, selective, or controlled about enabling or activating service acquisition in the Palmer et al and Liu references.

Claim 1 defines a method as recited below:

A method of controlling service acquisition in a wireless local area network (WLAN) device, the method including the steps of:

determining a parameter that corresponds to a present environment for the WLAN device;

comparing said parameter to a predetermined value to provide a comparison, said predetermined value defining, in part, an environment where service for the WLAN device is desirable;

analyzing said comparison according to a rule to provide a decision;

enabling a service acquisition mode when the decision is favorable; and

foregoing said service acquisition mode when the decision is unfavorable.

Regarding claim 1, the Examiner maintains that Palmer et al discloses a method of controlling service acquisition in a wireless local area network (WLAN) device, including the steps as claimed, except that Palmer does not teach or suggest a service acquisition mode. The Examiner then construes or interprets Liu as enabling or foregoing a service acquisition mode.

More specifically, the Examiner maintains that Palmer teaches or suggests determining a parameter that corresponds to a present environment for the Wireless device (citing col 3. lines 15-19; col. 6, lines 20-27). The passage at column 3 of Palmer et al. concerns configurable parameters that are used to modify measurements related to connection quality that are made at a device, see col. 3, lines 7-15. The passage at column 6 of Palmer et al. describes an example of using measurement data (connection quality) to determine whether to rate shift (e.g. uses present connection at lower data rates) or to roam (e.g. seek service from another access point). Note that even if the measurement is construed as a parameter corresponding to a present environment

for the device, service has already been acquired and thus a service acquisition mode has been enabled for any of these measurements to be made.

The Examiner then construes Palmer et al to show “comparing the parameter to a predetermined value to provide a comparison (citing col. 5, lines ??), the predetermined value defining in part, an environment where service for the WLAN device is desirable” (citing col. 6, lines 33-40; col 5, lines 53-54). Column 5 of Palmer et al. generally discusses the notion that the connection should always be available (lines 20-30 for example) and discusses determining whether to rate shift or roam based on the measured information as processed (lines 40-63). However, even if this discussion is construed to show comparing the measured signal quality to a predetermined value, clearly there is nothing about the predetermined value that defines an environment where service for the device is desirable. In Palmer et al service is always desirable (see lines 20-30 for example) and the measurements and processing that occurs is pursuant to evaluating whether or what quality of a connection is available. Palmer et al does not show or suggest the claimed comparing element using a predetermine value that relates to an environment where service is desirable and thus does not show or suggest the claimed comparison.

The Examiner then maintains that Palmer et al (col. 6, lines 41-53) shows or suggests analyzing the comparison according to a rule (rate shift/roam criteria) to provide a decision. While Applicant will concede that some analyzing according to a rule yielding a decision is being discussed by Palmer, it is noted that this analyzing is not the claimed analyzing the comparison, since as noted above the claimed comparison has not been shown.

The Examiner then construes Palmer et al to show or suggest enabling a connection acquisition mode when the decision is favorable (citing col. 4, lines 15-19; col. 5, lines 60-63);

and foregoing the connection acquisition mode when the decision is unfavorable (col. 3, lines 17-19). Applicant is unable to construe the cited passages as showing enabling or foregoing a connection acquisition mode. Applicant will agree that in general Palmer et al discusses changing a connection, either to a different data rate or via roaming to a different physical connection.

The Examiner concedes that Palmer et al does not specifically disclose a service acquisition mode, but maintains that Liu discloses enabling/foregoing a service acquisition mode based on the location of the WLAN device (col. 6, lines 5-29; col. 3 lines 23-40). Applicant respectfully disagrees with the Examiner's construction of Liu. The passage at column 6 discusses the desirability or need to provide a mobile terminal with descriptions of services (file servers, etc.) and other attributes of such services (types of connectivity) that are available as a function of geographical location. The passage at column 3 discusses identifying hosts and routers located at a destination or predicted destination for a mobile agent. Applicant respectfully submits that these passages or the balance of Liu taken alone or together with Palmer et al is not susceptible to a good faith construction that shows or suggests enabling or foregoing a service acquisition mode as claimed.

For the reasons noted above, Applicant respectfully submits that Palmer et al and Liu taken singularly or in combination do not show or suggest the limitations of claim 1 and thus do not support an obviousness rejection of this claim. Therefore, Applicant respectfully requests that the Examiner reconsider and withdraw this rejection of claim 1 under 35 U.S.C. 103(a) based on Palmer et al (U.S. Patent No. 6,556,553) in combination with Liu (U.S. Patent No. 5,825,759).

Claims 2-4 and 8-10 are dependent upon claim 1. From above, Applicant believes that claim 1 is allowable over the Palmer et al. and Liu references and thus at least by dependency claims 2-4 and 8-10 should likewise be allowable. Therefore Applicant respectfully requests that the Examiner reconsider and withdraw this rejection of claims 2-4 and 8-10 under 35 U.S.C. 103(a) based on Palmer et al (U.S. Patent No. 6,556,553) in combination with Liu (U.S. Patent No. 5,825,759).

b) Claims 5 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al in view of Liu and further in view of Jyogataki et al. (U.S. Patent No. 6,192,251).

Claims 5 and 7 are dependent upon claim 1. From above Applicant believes that claim 1 is allowable over the combination of Palmer et al. and Liu references. The Jyogataki et al reference does nothing to suggest or supply the missing teachings and thus claim 1 appears to be allowable over the combination of all three references. Therefore claims 5 and 7 at least by dependency should likewise be deemed allowable. Therefore Applicant respectfully requests that the Examiner reconsider and withdraw this rejection of claims 4-5 and 7 under 35 U.S.C. 103(a) based on Palmer et al (U.S. Patent No. 6,556,553) in combination with Liu (U.S. Patent No. 5,825,759) and further Jyogataki et al. (U.S. Patent No. 6,192,251).

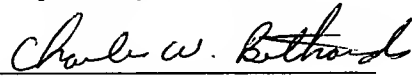
c) Claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Palmer et al in view of Liu in view of Jyogataki et al. as applied to claim 5 above, and further in view of Moore et al. (U.S. Patent No. 6,434,381).

Claim 6 is dependent upon claim 1. From above Applicant believes that claim 1 is allowable over the combination of the Palmer et al. and Liu references. The Jyogataki et al or the Moore, et al. (U.S. Patent No. 6,434,381) references do nothing to supply or suggest the missing teachings and thus claim 1 appears to be allowable over the combination of all four references. Therefore claim 6 at least by dependency should likewise be deemed allowable. Therefore Applicant respectfully requests that the Examiner reconsider and withdraw this rejection of claim 6 under 35 U.S.C. 103(a) based on Palmer et al. (U.S. Patent No. 6,556,553) in combination with Liu (U.S. Patent No. 5,825,759), Jyogataki, et al. (U.S. Patent No. 6,192,251), and Moore, et al. (U.S. Patent No. 6,434,381).

Accordingly, Applicant respectfully submits that the claims, as amended, clearly and patentably distinguish over the cited references of record and as such are to be deemed allowable. Such allowance is hereby earnestly and respectfully solicited at an early date. If the Examiner has any suggestions or comments or questions, calls are welcomed at the phone number below.

Although it is not anticipated that any fees are due or payable, the Commissioner is hereby authorized to charge any fees that may be required to Deposit Account No. **50-1147**.

Respectfully submitted,


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